NASPI PARTF

PMU Applications Requirements Task Force

NASPI North American SynchroPhasor Initiative

Scope

- *Quantification of the effect of errors (that are capable of being parameterized), on applications that use synchrophasor data.*
- *This will include error sources such as primary transducers like PT/CT devices, synchrophasor accuracy errors, and data communication parameters.*
- *This project will examine the effect of application input errors and attempt to quantify input data performance and accuracy required to allow applications to achieve their intended functions.*

Venue

- So far we have been successful meeting and working online.
- We will continue to do so, so there are no plans for a future face to face meeting!

Phases

- A task group within the TF created a white paper (report): *"Synchrophasor Data Quality Attributes and a Methodology for Examining Data Quality Impacts upon Synchrophasor Applications"*
  - Funded by DOE/DOC. Lead by Alison, Written by folks at PNNL, NIST, & Alison
  - *This is a call for comment*: please download the document from www.naspi.org/partf

  Or use the link: https://www.naspi.org/File.aspx?fileID=1689
  - Please review and comment
- PARTF conference call *soon! (*Date TBD by doodle poll*)*
- Apply the above methodology to three to five applications

The white paper

NASPI North American SynchroPhasor Initiative

NASPI-2016-TR-002
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Synchrophasor Data Quality Attributes and a Methodology for Examining Data Quality Impacts upon Synchrophasor Applications

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March 2016

- A brief overview was presented here last Monday.
- Proposes terms and definitions to be used by the project and industry in the future.
- Proposes a methodology for measuring and analyzing applications

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Upcoming *soon* conference call

- This is not to discuss the paper comments
  - That will happen at a later conference call.
- Call for 3 to 5 applications to begin analysis:
  - Key applications
  - High Technology Readiness Level
  - Input from one or only a few PMUs (keep it simple at the beginning)
  - Must have an expert on the application volunteer to lead the analysis task group for each application
- One or more of these projects may be eligible to apply for the current DOE FOA for industry
  - Task group lead would need to apply before deadline June 30.
  - Sorry, this work is out-of-scope for the academic DOE FOA ☹

Resources for the Analysis Task Groups

- Task Group lead will build a team to work on the analysis
- May draw on resources from
  - Within own organization
  - Other PARTF members
  - Some PARTF members are university professors and may have some students who can help
  - NIST can be a part of all task teams and provide some tools and data
    - NIST will NOT lead any of the task groups
  - PNNL participation is to be determined.
- Proposed time frame for completion of the first few projects: Q3/Q4 2016. This is a soft deadline.

Students! (and professors)

- NIST is looking for an intern to work in Gaithersburg, MD for the summer (and possibly beyond…)
  - In conjunction with Oak Ridge National Laboratories and University of Tennessee (CURENT)
  - U.S. citizens preferred (we are part of the U.S. Government after all)
    - Foreign citizens will also be considered.
- The project is to analyze the error characteristics of 15 PMUs and develop a “PMU data impairment” class which can impair ideal PMU data to use as input to PMU applications.
  - NIST already has all the error data
  - An interest in data analytics will help
  - This work will result in a journal publication
- Contact: Dr. Yilu Liu at UTK: liu@utk.edu

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Thank you

- Questions, comments, *discussion?*

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